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<td>Office No.</td>
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**LOCALITY**

Beaufort Sea (Arctic Coast)

Midway Islands, Cross Islands,

McClure Islands, Stockton Islands.

1949

**CHIEF OF PARTY**

R.A. Earle, Chief of Party
Charles W. Clark, Portland, Oregon

**LIBRARY & ARCHIVES**

DATE June 30, 1953
DATA RECORD

T-9340 to T-9343 Incl.

Project No. (II): Ph-29(47) I Quadrangle Name (IV):


Photogrammetric Office (III): Portland, Oregon Officer-in-Charge: C.W. Clark

Instructions dated (II) (III) 4 Feb. 1948 Field Copy filed in Division of

15 Feb. 1949 Office Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:20,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): 4-25-50 Date reported to Nautical Chart Branch (IV): 5-2-50

Applied to Chart No. Date: Date registered (IV) 24 Dec. 1952

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): FLAXMAN ISLAND

See reverse side of this page for elev. triangulization: Angel of sea Ice

corrections to Preliminary N.A.1927 Datum. Vertical Datum (III): Mean High-Water

G. B. Willey, Oct. 1934

Mean sea level except as follows:

Difference between "level of sea Ice" and mean sea level not obtained (assumed to be

Elevations shown as (25) refer to mean high water
ELM above MSL). Elevations shown as (3) refer to sounding datum

i.e., mean low water or mean lower low water.

Reference Station (III): KARLUK, 1949

Lat.: (See Office Instructions Long.: Adjusted

Ph-29(47) ) Unadjusted X

Plane Coordinates (IV): State: Zone:

Y= X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.
T-9340
The difference between Flaxman Island Datum and preliminary N.A. 1927 Datum is Lat. ±105 m. and Long. plus/minus 103 m.

T-9341
The difference between F.I. Datum and preliminary N.A. 1927 Datum is Lat. ±105 m. and Long. plus/minus 103 m.

T-9342
The difference between F.I. Datum and preliminary N.A. 1927 Datum is Lat. ±123 m. and Long. plus/minus 108 m.

T-9343
The difference between Flaxman Island Datum and preliminary N.A. 1927 Datum is Lat. ±130 m. and Long. plus/minus 108 m.
Areas contoured by various personnel
(Show name within area)
(II) (III)
DATA RECORD

Field Inspection by (II): C.A.J. Pauw and L.M. Ganoong Date: Season 1949

Planetary contouring by (II): Date:

Completion Surveys by (II): Date:

Mean High Water Location (III) (State date and method of location): From 1949 Field Inspection Data; Shoreline indicated on the boat sheets; examination of the photographs with the aid of the stereoscope, and by conference with personnel of the Arctic Party in Seattle, Washington on 1 March 1950.

Projection and Grids ruled by (IV): Washington Office Date: February 1950

Projection and Grids checked by (IV): Washington Office Date: February 1950

Control plotted by (III): Carita Wiebe Date: January 4 & 5, 1950

Control checked by (III): Marie B. Elrod Date: January 5, 1950

Radial Plot or Stereoscopic Control extension by (III): James L. Harris & J.E. Deal Date: March 13, 1950 (Final)

Stereoscopic Instrument compilation (III):

Planimetry

Contours

Manuscript delineated by (III): Ree H. Barron (Final) Date: 15 March 1950 to 21 March 1950

Photogrammetric Office Review by (III): J.E. Deal (Final) Date: 16 March to 22 March 1950

Elevations on Manuscript checked by (II) (III): Ree H. Barron J.E. Deal Date: 21 March 1950 22 March 1950

PHOTOGRAPHS (III)

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Note:
Date and time of above photography was not furnished the compilation office.

Reference Station: Kodiak
Subordinate Station: Flaxman Island, Arctic Ocean

Washington Office Review by (IV): [Signature]
Date: 8/31/51

Final Drafting by (IV): [Signature]
Date: [Blank]

Drafting verified for reproduction by (IV): [Signature]
Date: 7/9/52

Proof Edit by (IV): [Blank]
Date: [Blank]

Land Area (Sq. Statute Miles) (III): 2.5
Shoreline (More than 200 meters to opposite shore) (III): 40 Statute miles
Shoreline (Less than 200 meters to opposite shore) (III): None

Control Leveling - Mds (II):
Number of Triangulation Stations searched for (II): 14 Recovered: 14 Identified: 10
Number of BMs searched for (II): 1 Recovered: 1 Identified: 1
Number of Recoverable Photo Stations established (III):
Number of Temporary Hydro Stations established (III): 11* (Established in field)

Remarks:
* Five hydro stations were identified to supplement the triangulation stations for use as horizontal control in the radial plot.
SUMMARY TO ACCOMPANY T-9340 to T-9343

As of this date (Feb. 1951) planimetric project Ph-29(47) consists of 69 maps, scale 1:20,000, 26 in Part I (Martin Point westward and Jones Islands), and 43 in Part II (Kuparuk River westward to Point Barrow. The project area extends from 143° 10' to 156° 30' west longitude, Arctic Ocean coastal area (Beaufort Sea).

This project was designed to furnish basic surveys for a special nautical chart.

T-9340, T-9341, T-9342, and T-9343 are a part of the Part I group and cover Midway Islands, Cross Island, McClure Islands, and Stockton Islands, respectively.
FIELD INSPECTION REPORT
Map Manuscripts T-9340 to T-9343 Incl.
Project Ph-29(47)

The compilation office was not furnished a detailed field inspection report for Project Ph-29(47).

There is certain field inspection data included in a report submitted by the Arctic Party entitled: "Photogrammetric Control Station Identification, Return Island to Brownlow Point, Arctic Coast, Alaska, Project CS-320, 1949". By R.A. Earle - filed in Library Archives with Completion Report.
PHOTOGRAMMETRIC PLOT REPORT
Map Manuscripts T-9340 to T-9343 Incl.
Project Ph-29(47)

21: AREA COVERED:

This photogrammetric plot report includes map manuscripts No'd. T-9340 to T-9343 incl. and embraces the areas of four island groups lying in the Beaufort Sea just off the north coast of Alaska between Longitude 146° 53' and Longitude 148° 22'.

22: METHOD:

Preliminary radial plots for T-9340 to T-9342 incl. were run on projections which were in error. The projection for T-9343 was corrected at the compilation office prior to running the preliminary radial plot. A final radial plot for each of these four maps was run on a correct projection, furnished by the Washington Office. Facts pertinent to these final radial plots are the subject of this photogrammetric plot report.

The radial plots were assembled by orienting hand templets, made from 9 lens photographs, to the identified horizontal control stations plotted on the four map manuscripts.

Each of the four map manuscripts includes in its area one of the four individual island groups.

Separate radial plots were run for each individual island group or map manuscript because a continuous photograph coverage to include the areas of all four groups of islands was not furnished.

There were but two photographs each covering the CROSS ISLAND group and the STOCKTON ISLANDS group and only two radials could be obtained to points on these islands.

Three photographs covered the Midway Islands group and four photographs covered the McClure Islands group.

It is believed, that due to the density of the identified horizontal control stations, that the above photograph coverage was adequate.

Identified horizontal control stations are spaced about four inches apart on the photographs and it was not believed necessary to select pass points for radial plotting.
Templets were drawn on 36" x 36" x .005" sheets of clear acetate (Kodapak). Master templet No. 21682, dated September 1948 was used to correct the radials for transforming errors and for errors due to paper distortion.

It is believed that very satisfactory results were obtained because a very large percentage of the identified sub-stations for horizontal control stations were held to during the running of these radial plots.

-23: ADEQUACY OF CONTROL:

The horizontal control stations identified for use in these radial plots were adequate. From data contained in the field inspection report it is evident that many changes occurred in the planimetric details of these islands during the two years that elapsed between the time the photographs were taken and the date of the location of the sub-stations. This fact is thought to be the principal cause of not being able to hold to some of the sub-stations because it is believed that in several cases the field party selected picture points for sub-stations that were not existing at the time of the field inspection. The field party, however, located two or more sub-stations at most control stations and it was possible at all stations, except at station "HAT" to hold to at least one of these located sub-stations. Refer to report entitled "Photogrammetric Control Station Identification, Return Island to Brownlow Point, Arctic Coast, Alaska, Project CS 320, 1949" under sub-headings as follows:

"General Description of Land" Paragraph 5
"Control Stations" Paragraph 2
"Field Work" Paragraph 3

Following is a list of sub-stations which could not be held in the radial plot.

In T-9340

ARGO - Point "A"
RAN - Point "B"

In T-9341

GROSS - Point "B"

In T-9342

WHAL - Point "B"
JEAN - Point "far"
CAT - Point "B"
KARLUK - Point "A" (Used Point "Y". See Photo 20039)
In T-93543

FOUND - Point "B"
BELVEDERE - Point "B"
COLD - Point "B"
HAT - Point "C"

Remarks on the pricking card for Station "HAT" indicate the identification to be assumed and not positive.

In the case of station KARLUK the position of station "Y" was computed and identified from data contained in Volume 3 pages 1, 2, and 3 of the field record books and from a sketch on the reverse side of field photo No. 20039.

A few minor errors were discovered in the transfer of the data from the field record books to the pricking cards.

All of the foregoing difficulties were discussed with Lt. Don A. Jones and Comdr. R.A. Earle at a conference when Lt. Comdr. C.W. Clark and the writer visited the Arctic Party in Seattle on 1 March 1950.

At this conference it was conceded that, when the facts of the difficulty of identification were considered, the work on the substitute stations in the area was very satisfactory and more than adequate for a good radial plot.

25: PHOTOGRAPHY:

Refer to Item 22 of this report for previous statements on photographs.

Attached is a sketch showing the control stations and photograph centers in the area.

In accordance with the instructions Forms M-2388-12 are omitted.

Approved:

Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal, Jr.
Cartographer
INTRODUCTION:

Preliminary shoreline compilations were made for T-9340 to T-9342 inclusive on projections which had been ruled in error on the projection ruling machine. A preliminary shoreline compilation was made for T-9343 after an erroneous projection was corrected at the compilation office. Ozalid prints showing these shoreline compilations were furnished the Washington Office for use in chart compilation and to Comdr. R.A. Earle, Chief, Arctic Party for edit of planimetric details. The compilation office was subsequently furnished correctly ruled projections and the planimetric details on these four sheets were recompiled. The following compilation report deals with the facts of these latest compilations.

31: DELINEATION:

Compilation was done by graphic methods. The sub-stations for horizontal control stations were spaced close enough to provide sufficient points to compile the planimetric details except on T-9342 where there were four minor pass points radially plotted to supplement the sub-stations on that sheet.

In general it is believed that the field inspection of planimetric details is not as complete as desired for the compilation of accurate shoreline maps. The difficulties of securing adequate field inspection, in this area, are readily appreciated after a conference was held with personnel of the Arctic Party where this feature was discussed. There are places where the field inspection of shoreline is in disagreement between the two field inspection photographs containing field inspection of the same areas. There are many places where the shape and location of the shoreline shown on the boat sheets is in disagreement with the field inspection and photograph detail.

Field inspection of the photographs showed that in numerous places the shoreline had changed. At some places the changes were indicated by the shoreline being sketched on the photographs. This sketching merely indicated that there was a change and did not necessarily show the shoreline in its true position. Changes in photographic detail made it impossible for the field inspector to tell where the shoreline was in relation to the detail on the photographs. At a few places, with more time available, the field inspector made measurements from control stations to various points along the shoreline. Shoreline delineated from these data is thought to be reasonably accurate.
Hydrographic parties noted changes in shoreline from that shown on the boat sheets. These changes were sketched on the boat sheets as it appeared from the hydrographic launch. It wasn't always possible to tell if the shoreline was relatively correct and merely out of position on the boat sheet or whether there was an actual change in the shoreline. (Refer to Item 5: "Boat Sheets" of the office project instructions for Ph-29(47) dated \* December 1949). There were several instances where the photograph details could not be fitted to the geographic positions of fourth order horizontal control stations and no notes were entered to indicate how to place the ground detail around these stations.

In order to clear up the above conditions a conference was held in Seattle, Washington on 28 February, 1 and 2 March 1950, with officers of the Arctic Party, namely: Comdr. R.A. Earle, Chief of Party, Lt. Comdr. Horace Connerly, Lt. Don A. Jones, Lt. Comdr. Charles W. Clark, Officer in Charge Portland Photo Office, and the writer. Field data, field inspection photographs, and osilid prints of all compilation work of the area that had been completed on that date were taken to Seattle for criticism and edit during this conference. Items of field inspection which were in disagreement were evaluated and with the added assistance of the officers of the Arctic Party who were actually on the ground a decision was reached on how to show the feature in doubt. Areas which had not been field inspected, but had been delineated in the compilation office, were edited by the officers of the Arctic Party and from their knowledge of the terrain, several minor changes were made in the compilations.

Also, from their knowledge of the areas in the vicinity of the questionable fourth order stations the planimetric features around these stations were delineated.

Symbols believed to be satisfactory for indicating changes in ground elevations, bluffs, pingos, flooded area, etc. were also decided on at this time.

Hinkum Sands, an uncharted island on T-9341 was detailed from a sketch traced from smooth sheet H-7761(1950).

It is believed that, as a result of this conference, the planimetry of these offshore groups of islands as existing during the field season of 1949, is adequate for charting purposes.

Notes are indicated on the map manuscripts where deviations of any consequence have been made from the photograph details.

For additional data on these offshore islands refer to Report entitled "Photogrammetric Control - Station Identification, Return Island to Brownlow Point, Arctic Coast, Alaska, Project GS-320, 1949", portions of pages 1, 2, and 3.
32: **CONTROL:**

Refer to Item 23: "Adequacy of Control" of the Photogrammetric Plot Report which is attached.

33: **SUPPLEMENTAL DATA:**

The boat sheets were used to supplement the photographs in the delineation of shoreline.

34: **CONTOURS AND DRAINAGE:**

Not applicable to these four map manuscripts.

35: **SHORELINE AND ALONGSHORE DETAILS:**

The land area on these four map manuscripts consists of numerous small sand islands and it is believed that the facts relative to the mean high-water line have been included under Item 31: "Delineation" of this report.

There are no low-water lines shown. Two small islands believed to be at low-water have been outlined with a dashed line.

Approximate shoal lines have been detailed from the photographs with the aid of soundings shown on the boat sheets.

36: **OFFSHORE DETAILS:**

No offshore features were ascertained from examination of the photographs nor indicated by field inspection.

37: **LANDMARKS AND AIDS:**

Forms 567 for the areas of these map manuscripts were not furnished this office. It is assumed that the Arctic Party has completed recommendations for these features and submitted them to the Washington Office.

38: **CONTROL FOR FUTURE SURVEYS:**

Not applicable to the compilation work.
39: JUNCTIONS:

Water areas are at all junctions of these four map manuscripts.

40: HORIZONTAL AND VERTICAL ACCURACY:

From data in the photogrammetric control station identification report and from discussion with personnel of the Arctic Party it is possible that these islands will be greatly changed when they are visited again. They are believed to be accurate as of the 1949 Arctic field season.

46: COMPARISON WITH EXISTING MAPS:

There were none available to this office for comparison purposes.

47: COMPARISON WITH NAUTICAL CHARTS:

Visual comparison was made with Chart 9400, Edition of May 1947, hand corrected 1/16/50, Scale 1:1,557,570 at Latitude 70° 00'.

48: GEOGRAPHIC NAME LIST:

The geographic names on the four map manuscripts were obtained from a copy of Nautical Chart 9400 on which the final names had been indicated. An alphabetical list is attached.

Approved:

Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal, Jr.
Cartographer
PHOTOGRAMMETRIC OFFICE REVIEW
T-9040 & T-9043

1. Projection and grids  
2. Title  
3. Manuscript numbers  
4. Manuscript size  

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy  
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)  
7. Photo hydro stations  
8. Bench marks  
9. Plotting of sextant fixes  
10. Photogrammetric plot report  
11. Detail points  

ALONGSHORE AREAS
(Nautical Chart Data)
12. Shoreline  
13. Low-water line  
14. Rocks, shoals, etc.  
15. Bridges  
16. Aids to navigation  
17. Landmarks  
18. Other alongshore physical features  
19. Other alongshore cultural features  

PHYSICAL FEATURES
20. Water features  
21. Natural ground cover  
22. Plantable contours  
23. Stereoscopic instrument contours  
24. Contours in general  
25. Spot elevations  
26. Other physical features  

CULTURAL FEATURES
27. Roads  
28. Buildings  
29. Railroads  
30. Other cultural features  

BOUNDARIES
31. Boundary lines  
32. Public land lines  

MISCELLANEOUS
33. Geographic names  
34. Junctions  
35. Legibility of the manuscript  
36. Discrepancy overlay  
37. Descriptive Report  
38. Field inspection photographs  
39. Forms  

Reviewer  
Supervisor, Review Section or Unit  

41. Remarks (see attached sheet)  

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43. 

Compiler  
Supervisor  

43. Remarks:
LIST OF GEOGRAPHIC NAMES

T-9340

Argo Island
Beaufort Sea
Midway Islands
Reindeer Island

T-9341

Beaufort Sea
Cross Island
*Dinkum Sands*

T-9342

Beaufort Sea
Jeanette Island
Karluk Island
McClure Islands
Narwhal Island

T-9343

Beaufort Sea
Belysene Island
Newport Entrance
Pole Island
Stockton Islands

* The name Dinkum Sands does not appear on the final name sheet. It was obtained from the Arctic Party and was probably submitted by that party as an additional geographic name.

Names underlined in red are approved.
2-8-51. L. Heck
REVIEW REPORT
Planimetric Manuscripts

T-9340 Beaufort Sea, Midway Islands, Alaska
T-9341 Beaufort Sea, Cross Island, Alaska
T-9342 Beaufort Sea, McClure Islands, Alaska
T-9343 Beaufort Sea, Stockton Islands, Alaska

61. Control (1949) on these map manuscripts consists of second, third, and fourth order stations which have received only field computations (945 GTZ/G-8334 and G-8337). The fourth order stations are not marked or described. Having been included in the geographic positions listing (form 2B-B) of areal control, no forms 524 have been filed for the topographic stations in the entire project. They are recorded on the map manuscripts with the usual topographic symbol and label.

One hydrographic station appears in this area project, 4101 (Tide Gage). This station was not used in the radial plot.

62. Comparison with Registered Surveys:

None exist

63. Comparison with Contemporary Hydrographic Surveys:

H-7757; H-7760; H-7761, 1:40,000 1950

These surveys were used by the compiler to supplement the 1949 field inspection data on the 1947 photographs because the islands of the mapped area are subject to notable change from year to year. The hydrographic surveys had also located small islands not visible on the photographs and not located by field inspection.

Notes on each manuscript state the fact that the shoreline delineation is a composite of 1949 field inspection on 1947 photographs and of 1949 hydrographic data.

65. Comparison with Nautical Charts:

9400 1:1,587,870 (at Lat. 70°00'N) ed. May 1947, rev. Nov. 1950
66. **Accuracy:**

   These maps are adequate for charting purposes.

Reviewed by:

Lena T. Stevens

Approved by:

S. J. Griffiths  
Chief, Review Section  
Div. of Photogrammetry

W. L. Edmondson  
Chief, Nautical Chart Branch  
Div. of Charts and

G. W. Jones  
Chief, Div. of Photogrammetry

Earl O. Heaton  
Chief, Div. of Coastal Surveys
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<td>2/15/55</td>
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<td>JF Walker et al</td>
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A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.
HORIZONTAL DATUM ADJUSTMENT

ARCTIC OCEAN AREA, ALASKA

Corrections to Preliminary N.A. 1927 Datum from the various independent horizontal datums on the north coast of Alaska have been determined by the Division of Geodesy, being computed from field positions, allowing for closure in azimuth and length. This procedure was started from adjusted N.A. 1927 Datum stations at about the 63rd Parallel on the Canadian Boundary, followed the 141st Meridian (IBC Datum) to Beaufort Sea (Arctic Ocean), thence westward through the Barter Island 1948, Flaxman Island and Point Barrow 1945 Datums to a connection with adjusted N.A. 1927 Datum in the area of Ketzebue Sound, off Chukchi Sea. The position of the stations in this area is subject to further adjustment after more geodetic field work.

PLANE METRIC MAPPING PROJECT

Ph-29(47) PART I

Jones Islands to vicinity of Barter Island, Alaska

T-9340 thru T-9360 and T-8624 thru T-8628

T-9340 thru T-9360: Flaxman Island Datum, correction in Latitude ranging from minus 3.15 sec. on T-934H4 to 4.99 sec. on T-935H4, and in Longitude from plus 9.25 sec. on T-934H4 to 11.16 sec. on T-935H4.

T-8624 thru T-8628: Barter Island 1948 Datum, correction of -1.29 sec. in Latitude and -20.41 sec. in Longitude.

These corrections were converted into meters, and stamped on Page T-2 in each descriptive report and near the title block on each manuscript and cloth-backed recorded map, with the exception that the cloth-backed maps for T-8624 thru T-8628 have not been completed. When these maps have been completed, they should be stamped the same as have been their descriptive reports, with the following stamp:

The difference between Flaxman Island Datum and preliminary N.A. 1927 Datum is Lat. minus Xm. and Long. plus Xm.

See the Special Report on HORIZONTAL DATUM ADJUSTMENT for Ph-29(47) PARTS I, II, & III, filed with the Completion Report for a project index showing the correction for each map.